plurality of different crystallization samples within the enclosed microvolume, the plurality of different crystallization samples comprising a protein to be crystallized and crystallization conditions which vary among the plurality of different crystallization samples;

allowing crystals of the protein to form in the plurality of crystallization samples within the microfluidic device; and

identifying which of the plurality of crystallization samples within the microfluidic device comprise a precipitate or a crystal of the protein.

19 18
~~25~~. (Amended) A method according to claim ~~24~~, wherein the one or more dividers are formed of an impermeable material.

20 18
~~26~~. (Amended) A method according to claim ~~24~~, wherein the impermeable material is an impermeable liquid.

21 18
~~27~~. (Amended) A method according to claim ~~24~~, wherein the impermeable material is an impermeable solid.

22 18
~~28~~. (Amended) A method according to claim ~~24~~, wherein the one or more dividers are formed of a permeable material.

23 18
~~29~~. (Amended) A method according to claim ~~24~~, wherein the one or more dividers are formed of a semipermeable material.

27 18
~~33~~. (Amended) A method according to claim ~~24~~, wherein at least one of the one or more dividers form an interface selected from the group consisting of liquid/liquid, liquid/ gas interface, liquid/ solid and liquid/ sol-gel interface.

28 18
~~34~~. (Amended) A method according to claim ~~24~~, wherein the one or more dividers are selected from the group consisting of a membrane, gel, frit, and matrix.

29 18
~~35~~. (Amended) A method according to claim ~~24~~, wherein the one or more dividers function to modulate diffusion characteristics between adjacent crystallization samples.

30

36. (Amended) A method according to claim 18, wherein at least one of the one or more dividers is formed of a semipermeable material which allows diffusion between adjacent crystallization samples.

31

37. (Amended) A method for determining crystallization conditions for a protein, the method comprising:

B5 end

within a microfluidic device, delivering material to a plurality of enclosed microvolumes via one or more lumens that each have a cross sectional diameter of less than 500 microns to form a plurality of different crystallization samples within the plurality of enclosed microvolumes, each microvolume comprising two or more crystallization samples, the different crystallization samples comprising a protein to be crystallized and crystallization conditions which vary among the plurality of different crystallization samples;

allowing crystals of the protein to form in the plurality of crystallization samples; and

identifying which of the plurality of crystallization samples comprise a precipitate or a crystal of the protein.